

## Control Measures Against Fungal Diseases of Vine in Andijan Region

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**Abstract:** Currently, vine diseases are widespread in Uzbekistan, they spoil the quality of grapes, severely damage branches and reduce productivity by 25-70%, depending on weather conditions.

**Key words:** Vine diseases, vine root, fungus, anthracnose, sulfur, superfar, hake, branch.

Oidium or powdery mildew (*Uncinula necator*), anthracnose (*Gloeosporium ampelophagum*), cercosporosis (*Cercospora vitis*), gray rot (*Botrytis cinerea*), black rot (*Phoma lenticularis*), cypress necrosis (*Rhacodiella vitis*), vine root rot Bacterial cancer of skin (*Bacterium tumefaciens*) is common. In the following years, the disease of mildew (*Plasmopara viticola*) is observed to seriously damage the vineyards of our Republic.

Oidium (flour dew) disease:



The disease is caused by the fungus *Uncinula necator* Burill. The fungus damages all the green organs of the vine. The disease also damages the fruit together with the green organs. The fruit infected with the fungus stops developing, turns brown, hardens and dries up. Later, the shell of a unilaterally infected fruit stops developing, cracks and the seed becomes visible. In times of drought, various saprophytic fungi fall on such fruits and rot them. As a result, the quality of the crop decreases and the quantity of the harvested crop decreases.

To prevent the disease, it is necessary to sprinkle mixtures of 35-40 kg of sulfur (1 part), road dust (1 part), slaked lime powder (2 parts) per hectare from early spring, when the vine produces 4-6 leaves. , the second is processed in 7-10 days, the third is processed 10-12 days after flowering, the fourth is processed 30-35 days before the harvest.



Sulfur powder glows in the heat. When the sun is down, the temperature in the leaves is 100C higher than in the air, and the branches and fruits are even hotter. Zambrug spores die in 4-6 hours at 39-400C, the most favorable conditions for development are between 5-360C. The sulfur burns and kills the spores. Therefore, it is necessary to thin the vines and ensure that the sun's rays fall. If the drug is sprayed in the morning before the dew rises, it adheres well to the plants.

### Chemical control measures.

When the first signs of oidium disease appear in vineyards or during the growing season, it is recommended to use one of the following fungicides against this disease: Flusil 40% k.e. per hectare - 0.05-0.06 l, Superfar 50% k.e. -0.16-0.18 l, Montozol 10% k.e. -0.2-0.25 l, Ampact 250 k.e. -0.1-0.15 l, Skort 25% k.e.-0.12 l, Microvial 80% v.g.-4.0 kg, Flint, 500 g/kg, v.g.-0.15 kg, Impanur 25% k.s. -0.1-0.15 l, Blue Bordeaux 20% v.g. In the 1st treatment - 7.5 kg, in the 2nd treatment - 10.0 kg and in the 3rd treatment - 12.5 kg, Ridomil Star s.p. - 2.5 kg, Chlorokis medi plus s.p. - 0.6-2.0 kg, Azoxifen 32.5% d.c.- 0.5 l, Kvadrit 32% d.c.-0.3-0.5 l are recommended to be used.

Signs of anthracnose disease are the appearance of reddish-gray or dark brown spots of various shapes on vine leaves.

In addition, the leaves become hollow and fall off. Later, in place of such spots, curved wounds appear. Bumps appear on the edges of the wounds, and spots darken. As the disease progresses, the branches become black as coal. Infected branches become crooked, brittle and break under the influence of wind. Also, the leaves become smaller and dry. On the edges of infected leaves, gray spots with a dark brown border are formed. The damaged tissue of the leaf is disintegrated and shed. The disease develops strongly in places where there is a lot of depth and humidity, riverbanks, near underground water, where vines are planted thickly. The fungus that causes spotted anthracnose overwinters in the form of mycelia in the tissue of infected branches. This fungus produces many generations during the season. The vine branch is infected in the first second month of the growing season, and the leaves are infected in the first month. Therefore, this disease does not occur in the second half of summer. Vines infected with this disease dry up for 3-4 years. The fungus that causes the disease infects only vines. Varieties of husyni, black raisin, white raisin, chillaki, charos, buvaki are severely affected by the disease.

The disease affects all the above-ground parts of the vine. In addition, spots surrounded by a black border appear on infected flowers. Most of the infected flowers fall off. Infected grapes develop gray pits surrounded by a dark border. Such grapes grow unilaterally. In most cases, the fruits dry up and fall off or hang on the branch.



In the fight against this disease, it is effective to clean the field from plant residues before burying and plowing the vine, to take the branches prepared for planting from healthy plants, to carry out high-quality weeding before and after the flowering of the vine, and to water it in moderation.

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